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10/682,088	10/10/2003	Hamid Mahmood	77682-519	9198

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EXAMINER	
ABELSON, RONALD B	
ART UNIT	PAPER NUMBER
2476	

NOTIFICATION DATE	DELIVERY MODE
12/06/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us.mail@smart-biggar.ca

Office Action Summary	Application No.	Applicant(s)	
	10/682,088	MAHMOOD ET AL.	
	Examiner	Art Unit	
	RONALD ABELSON	2476	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/23/10*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 September 2007 and 10 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application.
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-8, 11, 12-18, 21-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Alriksson (US 6,977,938) in view of Dolganow (US 2006/0123110) and McAllister (US 2001/0010681) and Iwata (US 6,108,708).

Regarding claims 1, 14, 24, 27, and 28 Alriksson teaches a method of routing packets from a wireless communications terminal (mobile networks, source routing, source determines sequence of hops each packet should traverse, col. 3 lines 3-8). Note, in source routing, the route is chosen at the source.

Although Alriksson teaches wireless links (mobile networks), the reference is silent on receiving, via a respective wireless link from at least one of a plurality of

wireless access nodes forming a network, network information relating to links between nodes.

Like Alriksson, Dolganow teaches source routing. Furthermore, Dolganow teaches receiving, via a respective link from at least one of a plurality of access nodes forming a network, network information relating to links between nodes (advertising available resource information, source routing protocol uses available resource advertisements for identifying a path, abstract, resource information, available bandwidth, [0033], by understanding bandwidth information, source nodes generating connection set-up messages can route connection set-up messages in an intelligent manner, [0034]). Note, Alriksson teaches a source node A 30 in figure 1 ([0062]). As seen in the figure, the originating parties 10 are only connected to the source node. Therefore, the originating parties do not have a choice where to transmit and must always transmit to the source node.

Alriksson is silent on selecting a route via the network for packets from the terminal in dependence upon the network information and supplying packets with information relating to the selected route.

Dolganow teaches selecting a route via the network for packets from the 'source node' in dependence upon the network information and supplying packets with information relating to the selected route (source routing protocol uses the available resource advertisement for identifying a path, abstract, path selected by the source node, [0037], source node uses these metrics to choose the route, [0048]).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Alriksson by receiving, via a respective wireless link from at least one of a plurality of wireless access nodes forming a network, network information relating to links between nodes and selecting a route via the network for packets from the source node in dependence upon the network information, and supplying packets with information relating to the selected route, as suggested by Dolganow. This modification can be performed by transmitting available resource advertisement messages as shown by Dolganow. This modification would benefit the system by ensuring the source nodes choose a route based upon the current available bandwidth between the links.

The combination is silent on the terminal selecting a route in dependence upon information dependent upon wireless communications between the terminal and at least one of the nodes.

McAllister, like Alriksson, teaches source routing. Furthermore, McAllister teaches the 'source node' selecting a route in dependence upon information dependent upon communications between the 'source node' and at least one of the nodes (source routing, link cost, [0007]). As seen in figures 1 and 2, the source node is node A. Note, User 1 does not have a choice where to transmit and must always transmit to node A.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by selecting a route in dependence upon information dependent upon communications between the source node and at least one of the nodes, as shown by McAllister. This modification would benefit the system by ensuring that the chose route is affordable to the end user.

Although the combination teaches selecting a route from a 'source node', the combination is silent on selecting a route from the terminal.

Like Alriksson, Iwata teaches source routing. Furthermore, the reference teaches selecting a route from terminal (fig. 1 box 100, 120, col. 1 lines 47-49, col. 6 lines 39-41).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by selecting a route from the terminal, as shown by Iwata. This modification can be performed by having the network send the routing information to the terminals in order for the terminals to determine the optimal route. This modification would benefit the system in the case wherein the terminal is connected to a plurality of source nodes and the terminal will be able to decide which source node is optimal for routing. Furthermore, having the terminal select the route will speed up call setup.

Regarding claim 2, the terminal, monitoring a status of the selected route (Dolganow: source routing protocol uses the available resource advertisement for identifying a path, abstract).

Regarding claim 3, in the terminal, receiving and monitoring network information to determine a status of the selected route and, selectively in dependence upon the determined status, selecting a new route via the network for packets from the terminal (Dolganow: source routing protocol uses the available resource advertisement for identifying a path, abstract).

Regarding claims 4 and 16, selecting a route including wireless communications between the terminal and a different one of the nodes (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claims 5, 6, the links between the nodes comprise wireless communications links (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claims 7, 17, 21, and 23, in addition to the limitations already addressed, the network information comprises Quality of Service parameters (McAllister: quality of service, [0007]).

Regarding claims 8 and 18, network information comprises an available bandwidth for each link between nodes in at least a part of the network (Dolganow: resource information, available bandwidth, [0033]).

Regarding claims 11, 12, 22, 25, and 29, a wireless communications terminal arranged for operation in accordance with the method of claim 4 (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claims 13 and 26, a plurality of wireless access nodes, a plurality of links between nodes for packet communications in the network, and at least one wireless communications terminal as claimed in claims 12, 25 for wireless communications with the wireless access nodes, the wireless access nodes being arranged for supplying to the terminal said network information relating to links between the nodes (Alriksson: mobile networks, source routing, col. 3 lines 3-6).

Regarding claim 15, in the terminal, monitoring network information to determine a status of the selected route and, selectively in dependence upon the detected status, selecting a new route via the network for packets from the terminal (Dolganow: advertising available resource information, source routing protocol uses available resource advertisements for identifying a path, abstract, resource information, available bandwidth, [0033]).

3. Claims 9 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Alriksson, Dolganow, McAllister, and Iwata as applied to claims 6 and 14 above, and further in view of Miernik (US 7,155,215).

Although the combination teaches network information, the combination is silent on network information comprises a current delay for each link between nodes in at least a part of the network.

Miernik teaches the network information / QoS, comprises a current delay for each link between nodes in at least a part of the network (QoS, delays, connections).

Therefore it would have been obvious to one of ordinary

skill in the art, to modify the system of the combination by incorporating a link delay component in determining the QoS for each route, as suggested by Miernik. This modification can be performed in software. This modification would benefit the system since link delay is an integral determinant in the QoS for data being transmitted over a network.

4. Claims 10 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Alriksson, Dolganow, McAllister, and Iwata as applied to claims 6 and 14 above, and further in view of Seguin (US 7,206,295).

Although the combination teaches network information, the combination is silent on network information comprises an error rate for each link between nodes in at least a part of the network.

Sequin teaches QoS as a function of the error rate (col. 4 lines 25-28).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by incorporating an error rate component in determining the QoS for each route, as suggested by Sequin. This modification can be performed in software. This modification would benefit the

system since the error rate is an integral determinant in the QoS for data being transmitted over a network.

Prior Art of Record

Kennedy (US 2004/0219909) and Belcea (US 2003/0185166) teach the source routing being performed by a mobile wireless terminal.

Response to Arguments

Applicant's arguments filed 9/23/10 have been fully considered but they are not persuasive.

Regarding applicant's comment that the Examiner alleges Alriksson discloses in "source routing" the route is chosen by the terminal (pg. 3 2nd to last paragraph), the Examiner has clarified to state Alriksson discloses in "source routing" the route is chosen by the source.

Regarding applicant's comment that Dolganow does not disclose a wireless terminal having the functionality recited in claim 1 (applicant: pg. 4 last paragraph), as stated above Alriksson teaches source routing in a wireless environment. In

the same paragraph, the applicant states Dolganow does not disclose "in the terminal: receiving, via a respective wireless link from at least one of a plurality of wireless access nodes forming a network, network information relating to links between the nodes and a wireless terminal receiving via a wireless link from at least one of a plurality of wireless access nodes forming the network information relating to the other links". As shown above, the Examiner has relied on Dolganow to teach "in the source node: receiving, via a respective link from at least one of a plurality of access nodes forming a network, network information relating to links between the nodes and a source node receiving via a link from at least one of a plurality of access nodes forming the network information relating to the other links". As shown above, Doganow teaches a specific example (fig. 1) with Originating Parties (10) connected only to the Originating Switch (30). Therefore, the Originating Parties do not have a choice for their next hop. Thus it is not imperative, in this specific example, for routing information to be sent to the Originating Parties since the Originating Parties must always transmit to the Originating Switch. It would have been obvious if the Originating Parties were connected to more than one Originating Switch for routing information to be sent to the Originating Parties so the Originating Parties can optimally

select a route.

Regarding applicant's comments with respect to McAllister (pg. 5 1st paragraph), as shown above, McAllister like Alriksson, teaches source routing. Furthermore, McAllister teaches the 'source node' selecting a route in dependence upon information dependent upon communications between the 'source node' and at least one of the nodes. Like Doganow, McAllister teaches a specific example (figures 1 and 2) with User 1 connected only to Node A. Therefore, User 1 does not have a choice for its next hop. Thus it is not imperative, in this specific example, for routing information to be sent to the User 1 since User 1 must always transmit to the Node A. It would have been obvious if User 1 were connected to more than one node for routing information to be sent to User 1 so User 1 could optimally select a route.

Regarding applicant's comments (pg. 5 last paragraph), the applicant is arguing limitations that are not found in the claims. The Examiner interprets the applicant's comments to be the terminal bases its routing decision based on the link between the terminal and the node immediately connected to the terminal. However, both Dolganow and McAllister teach the source node bases its routing decision based on the link between the

source node and the node immediately connected to the source node. Given Iwata teaches the terminal makes the routing decision, it would have been obvious for the terminal to make its routing decision based on the link between the terminal and the node immediately connected to the terminal.

The applicant asserts the selection of Alriksson was based on hindsight (applicant: pg. 6 last paragraph). As stated in the office action Alriksson teaches source routing in a wireless environment.

Regarding the applicant's contention there is no suggestion of a desirability of the claimed invention in the references that would serve as a reason for one skilled in the art to combine (applicant: pg. 7 1^{et} paragraph). As shown above, all the references teach source routing and Iwata teaches source routing wherein the route selection is performed by the terminal.

Regarding applicant's comments on Dolganow (pg. 7 2nd paragraph), the Examiner has clarified the office action to explicitly state Dolganow teaches the source node determines the route.

Regarding applicant's comments on McAllister (pg. 7 3r^{d} paragraph), the Examiner has clarified the office action to explicitly state McAllister teaches the source node determines the route.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONALD ABELSON whose telephone number is (571)272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ronald Abelson
Primary Examiner
Art Unit 2476

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